

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/FI 2005/050138

## A. CLASSIFICATION OF SUBJECT MATTER

IPC7: D21C 1/02

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: D21C, D21B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI DATA, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4746404 A (OLIVER A. LAAKSO), 24 May 1988 (24.05.1988), figures 1,2	8-10
A	--	1-7,11-12
X	US 5617975 A (JERRY R. JOHANSSON ET AL), 8 April 1997 (08.04.1997), column 6, line 19 - column 7, line 20	8-9
A	--	1-7,10-12
A	US 4592804 A (STURE NOREUS ET AL), 3 June 1986 (03.06.1986)	1-12
	--	

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

\* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

29 August 2005

Date of mailing of the international search report

01-09-2005

Name and mailing address of the ISA/  
Swedish Patent Office  
Box 5055, S-102 42 STOCKHOLM  
Facsimile No. +46 8 666 02 86

Authorized officer

Marianne Bratsberg/Els  
Telephone No. +46 8 782 25 00

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/FI 2005/050138

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 9835089 A1 (KVAERNER PULPING AB), 13 August 1998 (13.08.1998)  --	1-12
A	WO 0040383 A1 (VALMET WOODHANDLING OY), 13 July 2000 (13.07.2000)  -- -----	11-12

## INTERNATIONAL SEARCH REPORT

Information on patent family members

08/07/2005

International application No.

PCT/FI 2005/050138

US	4746404	A	24/05/1988	AT	31754	T	15/01/1988
				BR	8404624	A	25/03/1986
				CA	1241859	A	13/09/1988
				DE	3468455	D	00/00/0000
				EP	0161330	A,B	21/11/1985
				SE	0161330	T3	
				EP	0226227	A	24/06/1987
				FI	81133	B,C	31/05/1990
				FI	843447	A	02/11/1985
				JP	60231888	A	18/11/1985
				NO	164045	B,C	14/05/1990
				NO	843665	A	04/11/1985
				US	4632729	A	30/12/1986
<hr/>							
US	5617975	A	08/04/1997	AU	1727995	A	21/08/1995
				BR	9506682	A	18/11/1997
				CA	2181892	A,C	10/08/1995
				CN	1048778	B,C	26/01/2000
				CN	1139968	A	08/01/1997
				DE	69528252	D,T	08/05/2003
				EP	0742854	A,B	20/11/1996
				SE	0742854	T3	
				ES	2182889	T	16/03/2003
				FI	963000	A	30/09/1996
				JP	2991500	B	20/12/1999
				JP	9507536	T	29/07/1997
				PT	742854	T	31/01/2003
				RU	2124600	C	10/01/1999
				US	5500083	A	19/03/1996
				US	5628873	A	13/05/1997
				WO	9521287	A	10/08/1995
				ZA	9500739	A	04/10/1995
<hr/>							
US	4592804	A	03/06/1986	AU	571536	B	21/04/1988
				AU	2937584	A	03/01/1985
				CA	1238222	A	21/06/1988
				FI	75879	B,C	29/04/1988
				FI	842559	A	28/12/1984
				FR	2549110	A,B	18/01/1985
				JP	1594590	C	27/12/1990
				JP	2014474	B	09/04/1990
				JP	60021994	A	04/02/1985
				NO	164182	B,C	28/05/1990
				NO	842571	A	28/12/1984
				NZ	208443	A	30/10/1987
				SE	451605	B,C	19/10/1987
				SE	8303646	A	28/12/1984

## INTERNATIONAL SEARCH REPORT

Information on patent family members

08/07/2005

International application No.

PCT/FI 2005/050138

WO	9835089	A1	13/08/1998	AU	2183797	A	26/08/1998
				BR	9807512	A	21/03/2000
				DE	69815816	D	00/00/0000
				EP	0954453	A,B	10/11/1999
				SE	0954453	T3	
				JP	2001509112	T	10/07/2001
				SE	512146	C	31/01/2000
				SE	9700193	A	25/07/1998
				US	6431557	B	13/08/2002
				WO	9835845	A	20/08/1998

---

WO	0040383	A1	13/07/2000	AT	267676	T	15/06/2004
				AU	2112300	A	24/07/2000
				CA	2356875	A	13/07/2000
				DE	60011040	D,T	21/10/2004
				EP	1140445	A	10/10/2001
				SE	1140445	T3	
				ES	2218104	T	16/11/2004
				FI	3922	U	21/04/1999
				FI	109103	B	00/00/0000
				FI	990014	A,V	08/07/2000
				ID	30141	A	00/00/0000
				NO	20013376	A	07/09/2001
				PT	1140445	T	30/09/2004
				US	6769532	B	03/08/2004

---